What is claimed is:

1   1.   A method of parsing a message containing strings of characters, comprising:

2   defining a plurality of delimiters;

3   setting a first pair of delimiters as first starting and closing indicators to turn

4 off any delimiter occurring in a first string between the first starting and closing indicators;

5   setting a second pair of delimiters as second starting and closing indicators to

6 turn off any delimiter occurring in a second string between the second starting and closing

7 indicators; and

8   collecting characters in the first and second strings between respective first

9 and second starting and closing indicators into respective tokens.

1   2.   The method of claim 1, further comprising setting at least another pair of

2 delimiters as further starting and closing indicators.

1   3.   The method of claim 1, wherein setting the first and second pairs of delimiters

2 include passing the pairs of delimiters as parameters in corresponding calls to a parser

3 routine.

1   4.   The method of claim 1, further comprising setting another pair of delimiters as

2 further starting and closing indicators and nesting the further starting and closing indicators

3 between the first starting and closing indicators.

1   5.   The method of claim 4, providing the nested starting and closing indicators to

2 turn off a delimiter character that is the same character as one of the first starting and closing

3 indicators between the nested starting and closing indicators.

1   6.   A method of parsing a message including a string of characters, comprising:

2   setting a first pair of constraints to turn off any delimiter occurring within the

3 first pair of constraints;

4   setting a second pair of constraints nested between the first pair of constraints

5 to turn off any delimiter occurring within the second pair of constraints; and

6   collecting a portion of the string of characters between the first pair of

7 constraints.

1   7.   The method of claim 6, wherein the second pair of constraints is set to turn off

2   any delimiter character that is the same character as one of the first pair of constraints

3   between the second pair of constraints.

1   8.   The method of claim 6, further comprising setting one or more pairs of

2   constraints nested between the second pair of constraints.

1   9.   A system capable of communicating messages over a network, comprising:

2   an interface unit adapted to receive a message including a plurality of

3   characters from the network, some of the characters being delimiters; and

4   a parser engine adapted to parse the message by defining a plurality of sets of

5   starting constraints and closing constraints and extracting corresponding tokens including

6   characters between corresponding sets of starting and closing constraints, the parser engine

7   adapted to treat any delimiter between each set of starting and closing constraints as a non-

8   delimiter.

1   10.   The system of claim 9, wherein the parser engine includes a parser routine, the

2   parser engine adapted to define a further set of starting and closing constraints nested

3   between a first set of starting and closing constraints, wherein the parser routine is adapted to

4   recursively call itself when the parser routine encounters a nested starting constraint.

1   11.   The system of claim 9, wherein the message is according to a predetermined

2   syntax.

1   12.   The system of claim 11, wherein the predetermined syntax includes a syntax

2   according to a Session Initiation Protocol.

1   13.   An article including one or more machine-readable storage media containing

2   instructions for processing a message including a string of characters, some of the characters

3   being defined as delimiters, the instructions for causing a system to:

4   set one of the delimiters as a starting constraint;

5   set another one of the delimiters as a closing constraint;

6   identify characters in the string between the starting and closing constraints as

7   being part of a token; and

8   treat any delimiter character between the starting and closing constraints as a

9   non-delimiter.

1   14.   The article of claim 13, wherein the one or more machine-readable storage

2   media contain instructions for causing a system to further nest second starting and closing

3   constraints between the first starting and closing constraints and treat any delimiter character

4   between the second starting and closing constraints as a non-delimiter.

1   15.   The article of claim 14, wherein the one or more machine-readable storage

2   media contain instructions for causing a system to further nest starting and closing constraints

3   within the second starting and closing constraints.

1   16.   The article of claim 13, wherein the one or more machine-readable storage

2   media contain instructions for causing a system to process the message according to a Session

3   Initiation Protocol.

1   17.   A method of parsing strings of characters, comprising:

2   setting predefined characters as delimiters;

3   calling a first instance of a routine and passing a first starting indicator and a

4   first closing indicator, the routine processing a first string to identify a first token separated

5   by the first starting and closing indicators and turning off any delimiter character between the

6   first starting and closing indicators; and

7   calling at least another instance of the routine and passing at least one other

8   starting indicator and one other closing indicator, the routine processing at least one other

9   string to identify at least one other token separated by the at least one other starting and

10   closing indicators and turning off any delimiter character between the at least one other

11   starting and closing indicators.

1   18.   The method of claim 17, further comprising passing further starting and

2   closing indicators in the call of the first instance of the routine, the further starting and

3   closing indicators nested between the first starting and closing indicators.

1   19.   The method of claim 18, further comprising the routine recursively calling

2   itself if the further starting indicator is encountered after detection of the first starting

3   indicator.

1   20.   Apparatus for parsing a message including a string of characters having a

2   plurality of delimiters, the apparatus comprising:

3   a control unit; and

4   a routine executable on the control unit, the routine adapted to receive a

5   starting constraint including one of the delimiters and a closing constraint including another

6   one of the delimiters to identify a first token,

7   the routine being adapted to process the string of characters by turning off any

8   delimiter character between a pair of starting and closing constraints to identify the first

9   token.

1   21.   A data signal embodied in a carrier wave comprising one or more code

2   segments containing instructions for processing a message including a string of characters,

3   the instructions when executed causing a system to:

4   define a first starting constraint and a first closing constraint;

5   define at least one other starting constraint and at least one other closing

6   constraint, the at least one other starting and closing constraints nested between the first

7   starting and closing constraints;

8   extract a token including characters within the first starting and closing

9   constraints; and

10   treat delimiter characters between the first and at least one other starting and

11   closing constraints as non-delimiters.

1   22.   The data signal of claim 21, wherein the one or more code segments are part

2   of a routine, the one or more code segments containing instructions that when executed cause

3   a system to further recursively call the routine upon encountering a nested starting constraint.

1   23. A method of parsing a message including characters, comprising:

2   processing through portions of the message;

3   setting different pairs of starting and closing constraints as the different

4   portions of the message are being processed, each pair of starting and closing constraints to

5   turn off any delimiter occurring between the pair of starting and closing constraints; and

6   collecting characters between the different pairs of starting and closing

7   constraints into respective tokens.